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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

ORTIZ CRIADO, JORGE L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2655

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|-------------------------------------|--|
| Office Action Summary | Application No. 10/047,139 | Applicant(s) IKEDA ET AL. | |
| | Examiner Jorge L Ortiz-Criado | Art Unit 2655 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/15/2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1-5, 7-16 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayashi et al. U.S. patent no. 6,363,039.

Regarding claim 1, Hayashi et al. discloses a tracking control method comprising the steps of:

(a) measuring an optimum offset by measuring a light beam irradiation state of a light beam while offsetting a tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position; and (b) carrying out a tracking control by setting the optimum offset measured by said step(a) (See col. 12 to col. 13, line19)(See col. 14, line 7 to col. 15, lines 25) (See col. 15, line 55 to col. 17, line 35)

Art Unit: 2655

Regarding claim 2, Hayashi et al. discloses of: (c) judging a type of the recording medium, said step (a) being carried out when said step (c) judges that the recording medium is a “high-density” recording medium (See col. 12, lines 32-42; col. 14, lines 41-47) (The offsetting tracking is carried out when is judged that the type of disk with tilt/jitter/etc... larger than the allowable amount, and is not carried out when is not greater, hence the step would be carried out to disks which are much susceptible to large offset error due to tilt, such as “high density” recording media)

Regarding claim 3, Hayashi et al. discloses wherein said step (a) detects the light beam irradiation state based on one parameter selected from a group consisting of a read error, a reproduced signal amplitude and an amount of focus control (See col. 12, line 49 to col. 13, line 19; col. 15, lines 12-25; col. 16, lines 11-24)

Regarding claim 4, Hayashi et al. discloses wherein said step (a) is carried out in a state where a waveform interference from an adjacent track is easily generated (See col. 12 to col. 13, line 19)(See col. 14, line 7 to col. 15, lines 25) (See col. 15, line 55 to col. 17, line 35)(Jitter, Radial tilt; Innermost portion of the disk)

Regarding claim 5, Hayashi et al. discloses wherein said step (a) is carried out for every predetermined radial position on the recording medium and/or for every one revolution angle of the recording medium (See col. 13, lines 31-52; col. 13, line 65 to col. 14, line 5)

Regarding claim 7, Hayashi et al. discloses further comprising (c) carrying out a reproducing process again by changing the optimum offset of the tracking target position in a positive or negative direction, when an error is generated during a reproducing process with respect to the recording medium (See col. 12, line 61 to col. 13, line 17; col. 14, line 50 to col. 15, line 25)

Regarding claim 8, Hayashi et al. discloses wherein said step (c) changes the optimum offset of the tracking target position in the positive or negative direction depending on a success rate of the reproducing process which is carried out again (See col. 12, line 61 to col. 13, line 17)

Regarding claim 9, Hayashi et al. discloses further comprising the step of: (c) setting an optimum offset depending on at least one of an object of a seek process and a target address on the recording medium (See col. 13, line 31 to col. 14, line 5; col. 17, lines 54-67)

Regarding claims 10 and 11, Apparatus claims 10 and 11 are drawn to the apparatus of performing the corresponding method claimed in claims 1 and 2. Therefore apparatus claims 10 and 11 correspond to method claims 1 and 2 and are rejected for the same reasons of anticipation as used above.

Regarding claims 12-16 and 18-20, Apparatus claims 12-16 and 18-20 are drawn to the apparatus of performing the corresponding method claimed in claims 1-5 and 7-9. Therefore

Art Unit: 2655

apparatus claims 12-16 and 18-20 correspond to method claims 1-5 and 7-9 and are rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. U.S. Patent No. 6,363,039 in view of Koyama et al. JP Publication No. 07-050019.

Hayashi et al. discloses a step (a) measuring an optimum offset by measuring a light beam irradiation state of a light beam while offsetting a tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position; and carrying out a tracking control by setting the optimum offset measured, as outlined above in claim 1.

But Hayashi et al. fails to disclose wherein said step (a) is carried out when a difference between previous and present measurement execution times is greater than or equal to a prescribed time AND/OR when a temperature difference between previous and present measurements is greater than or equal to a prescribed temperature.

Art Unit: 2655

However this feature is well known in the art as evidenced by Koyama et al., which discloses a tracking control method comprising measuring an optimum offset by measuring a light beam irradiation state of a light beam while tracking target position of the light beam on a recording medium so that an optimum light beam irradiation state is obtained at the tracking target position carrying out a tracking control by setting the optimum offset measured by said step (a) and when a temperature difference between previous and present measurements is greater than or equal to a prescribed temperature (See Abstract; detailed description [0035]-[0036]; [0048]-0053]; [0094]-[0098])

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to carried out measurement of an optimum offset when a temperature difference between previous and present measurements is greater than or equal to a prescribed temperature, because ^{this} allows the tracking control to correct and adjust tracking offsets due to temperature changes, as taught by Koyama et al.

Regarding claim 17, Apparatus claims 17 is drawn to the apparatus of performing the corresponding method claimed in claim 6. Therefore apparatus claim 17 correspond to method claim 6 and is rejected for the same reasons of obviousness as used above.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. JP Publication No. 10-283645 to Otsuka, which discloses an optical disk device performing the automatic measurement and adjustment of a tracking offset with a detection of the temperature changes.
- b. JP Publication No. 11-016172 to Miyata, which discloses prevents the incorrect reproduction when an offset by temperature change and an offset during disc loading are detected, by ensuring correct tracking.
- c. U.S. Patent No. 5,109,306 to Mase et al, which discloses a track access control system for a disc system including a track offset update unit, and a control unit, to access a head at a track with offset correction. The track offset update may be carried out in an initial condition, or when a seek command is received. Also, the track-offset update may be compulsorily effected when the update is not effected in a predetermined time, the track offset update may be effected in response to a temperature change of the system.
- d. U.S. Patent No. 6,339,567 to Shimamoto et al, which discloses an optical information reproduction method and apparatus with a tracking servo system using a tracking error signal, the effect of the offset which varies depending on the lens position can be corrected and a tracking error detecting means free from the offset can be obtained.
- e. U.S. Patent No. 6,101,053 to Takahashi, which discloses write condition setting method includes a measuring step for measuring at least one of a track per inch margin, an offset margin and an on-track accuracy margin with respect to a head for each of a plurality of temperatures prior to writing data on a track of a disk.

Art Unit: 2655

- f. U.S. Patent No. 6,434,096 to Akagi et al, which discloses an offset detection section and an amplitude detection section detect the offset amount and amplitude value of the tracking error signal respectively, and the tracking error signal is corrected by an offset correction circuit and an amplitude correction circuit on the basis of the offset amount and amplitude value having been checked beforehand.
- g. U.S. Patent No. 4,893,201 to Emori et al, which discloses track access control system for a disk apparatus and capable of an offset correction.
- h. JP Publication No. 04-265532 to Tabata et al, which discloses prevent the deterioration of the controllability of a tracking servo due to the change of a tracking offset difference for an optical disk used, temperature change and change caused by an elapse of time.
- i. JP Publication No. 2000-187855 to Yamashita et al, which discloses a track correcting method and storage device in accordance with a measured value of an offset.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER